

507 Fly Ash and Pozzolan Quality Management Plan

507.1 Introduction

- 507.1.1 The purpose of the Fly Ash and Pozzolan Quality Management Plan is to establish the procedures for becoming pre-qualified as a source of these materials by establishing qualified sources and verifying the compliance of materials shipped from these sources with specification requirements.

507.2 Applicable Specifications

- 507.2.1 Utah Department of Transportation (UDOT), Standard Specifications.
- 507.2.2 ASTM C-618 Fly Ash and Raw or Calcined Natural Pozzolan For Use as a Mineral Admixture in Portland Cement Concrete.
- 507.2.3 ASTM C-311 Methods of Sampling and Testing Fly Ash of Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete.

507.3 Procedure for Establishment as a Qualified Source of Fly Ash and/or Pozzolan.

- 507.3.1 The manufacturer will request that a producing plant be designated a qualified source by submitting to UDOT's Central Materials Testing Lab (CMTL) Engineer, a letter certifying the following:
- 507.3.1.1 The manufacturer maintains a quality control program. The letter will give the name, position, address, and telephone number of an individual at each production location who is responsible to the manufacturer for quality control of the material being shipped to UDOT projects. It must be signed by someone having legal authority to bind the company.
 - 507.3.1.2 Meets current UDOT specification requirements.
 - 507.3.1.3 Quality control laboratory is AASHTO accredited through the Cement and Concrete Reference Laboratory(CCRL).
- 507.3.2 The Manufacturer requesting status as a qualified source agrees to provide the QA Engineer the following:
- 507.3.2.1 A brief outline of the procedures used to evaluate the finished product, sampling and testing frequency, test sample preparation employed, physical testing and chemical analysis methods used such as X-ray, atomic absorption spectroscopy, or wet chemistry.
 - 507.3.2.2 A copy of the inspection report for each CCRL inspection.
 - 507.3.2.3 A one year history of the chemical and physical data showing compliance with requirements of ASTM C-311 & ASTM C-618.
 - 507.3.2.4 Monthly, composite sample results for all applicable chemical and physical tests required to satisfy the requirements of ASTM C-311 & C-618.
 - 507.3.2.5 Monthly, one set of data used to establish uniformity requirements of ASTM C-618.
 - 507.3.2.6 Yearly, a list of distributing terminals and marketing points served by each Manufacturer, ie Silos, Ready Mix Plants. Include location, address, contact person & phone number.

507.4 Acceptance as a Qualified Source.

- 507.4.1 Acceptance as a qualified source will be made in writing by the CMTL Engineer, based on the requirements of this management plan.
- 507.4.2 Designation of a plant as a qualified source will be made separately for each type of fly ash and/or Pozzolan.

507.5 Responsibilities of the Project Engineer.

- 507.5.1 Request a letter from UDOT's CMTL Engineer that verifies the fly ash/pozzolan to be used on the project is from a pre-qualified source.

507.6 Responsibilities of UDOT's CMTL Engineer.

- 507.6.1 Qualify the source.
- 507.6.2 Maintain a current file on each source including the required data that is sent.
- 507.6.3 Conduct verification sampling and testing in accordance with UDOT's Minimum Sampling and Testing Requirements.

507.7 Manufacturer Disqualification.

- 507.7.1 A producing plant may be removed from the list of qualified sources if results of tests of any two consecutive check samples do not comply with the uniformity requirements. Qualification may be discontinued for one type of fly ash and/or pozzolan without changing the status of other types.
- 507.7.2 A producing plant may be removed from the qualified source list if results from random sample testing do not conform with UDOT standard specifications.
- 507.7.3 A production plant may also be removed for failure to submit qualifying data monthly as requested.
- 507.7.4 A Manufacturer may be removed from the qualified source list for failure to maintain all of the requirements necessary to become an approved source.
- 507.7.5 A Manufacturer will be removed from the qualified source list and be required to re-apply as a qualified source, if not supplying to a UDOT controlled project within a 12 month period.

507.8 Procedures for Maintaining a Qualified Source of fly ash and/or pozzolan.

- 507.8.1 The power plant, batch plant, project site and terminal facilities of the suppliers participating in this program will be visited periodically by the CMTL Engineer or representative, to review procedures employed, project requirements, and provide guidance in the functional procedures of the program. They shall be afforded free access to any facility using, production or testing fly ash and/or pozzolan for UDOT projects.

507.9 The Qualified Source of fly ash and/or pozzolan Agrees to Provide the UDOT with the Following:

- (a) Obtain a minimum of two split samples per month of fly ash and/or pozzolan. Ship one part of the split sample to the CMTL engineer and retain the other half of the split for chemical and physical testing. The manufacturer will present chemical results to the CMTL within 24 hours after the split is made. Failure of the producer to conform with ASTM C-311, ASTM C-618, or this procedure, shall disqualify the manufacturer.

507.10 Project Samples.

- 507.10.1 Fly ash and/or pozzolan from a qualified manufacturer delivered to the project site or concrete batch plant may be sampled by a representative of UDOT anytime a material is suspect. The procedures for taking project samples will be in accordance with AASHTO and UDOT standard specifications to insure that the material sampled represents material shipped. When the test results of any two consecutive samples exceed the limit for any applicable specification property, an increased in sampling intervals as determined by CMTL Engineer can and/or will occur.